

CURCULIO PICIROSTRIS FABRICIUS, 1787 AND TYCHIUS
STEPHENSII SCHÖNHERR, 1836 (COLEOPTERA,
CURCULIONIDAE): PROPOSED CONSERVATION UNDER
THE PLENARY POWERS. Z.N.(S.)2266

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Two native European curculionid weevils whose larvae feed on seeds of clover (*Trifolium*) are economic pests in areas where clover is produced as a forage crop (Muka, 1954; Yunus & Johansen, 1967). Both weevils have been introduced from Europe into America. One of the weevils, known to American as well as European workers as *Tychius picirostris* (Fabricius, 1787) (*Mant. Ins.*, vol. 1, p. 101), is also called the clover seed weevil in America. Until recently, this species was known as *Miccotrogus picirostris*, but the name *Miccotrogus* Schönherr, 1825 (*Isis* (Oken), p. 583) has now been placed in synonymy with *Tychius* Germar, 1817 (*Mag. Entomol.* (Germar), vol. 2, p. 340) (Clark, 1976). The other weevil, known in America as *Tychius stephensi* Schönherr, 1836 (*Gen. et sp. Curcul.*, vol. 3 (1), p. 412) (sometimes spelled *stepheni*), is the red clover seed weevil. In Europe it is called *Tychius tomentosus* (Herbst, 1795) (*Nat. Ins.* (Käfer), vol. 6, p. 278). This proposal suggests that the nomenclature used by American workers for these two weevils be ratified. So far as *T. picirostris* is concerned, this will be advantageous to Europeans as well as Americans. As for *T. stephensi*, European workers should not be greatly inconvenienced by the replacement of *T. tomentosus* by this name, since the species does not appear to be of economic importance in Europe.

2. Although similar in general appearance, the two weevil species differ in the number of articles in the antennal funiculus: 6 in *T. picirostris*, 7 in *T. stephensi*, and in other features listed by Milliron, 1949. Nevertheless, in the first half of the present century the two species were frequently mistaken for each other by American workers. Milliron's 1949 listing of diagnostic characters was part of an attempt to eliminate the confusion apparent in the early literature. Milliron followed European authors in using the name *Miccotrogus picirostris* for the clover seed weevil. He rejected the name *Tychius tomentosus* for the species now known as the red clover seed weevil because that name in its original combination (*Curculio tomentosus*) is a junior primary homonym of *Curculio tomentosus* Olivier, 1790 (*Encycl. méth.* vol. 5 (Ins.), p. 536). Milliron decided that *Tychius stephensi* was the correct

name for the red clover seed weevil. Since publication of his paper, the names *picrostris* and *stephensi* have been applied consistently in America (except for variation in the spelling of the latter). However, Milliron's work has had no apparent impact upon European workers.

3. If Milliron had examined the type specimens of the species under consideration he would have seen that the nomenclature he proposed was incorrect. Type specimens of *T. picrostris*, *T. stephensi*, *T. tomentosus* and other species variously reported as synonyms have been examined (Clark, 1971). The pertinent synonymy is:

(a) for the species currently known as *T. stephensi* and *T. tomentosus*:

?*Curculio picrostris* Fabricius, 1787, p. 101, pars

Curculio tomentosus Herbst, 1795, p. 278 (non Olivier, 1790, p. 536)

Tychius stepheni Schönherr, 1836, p. 412

Tychius stephensi Schönherr (emendation by Stephens, 1839, p. 229)

(b) for the species currently known as *T. picrostris*:

Curculio cinerascens Marsham, 1802, p. 248

Tychius (Miccotrogus) picrostris (Fabricius), Schönherr, 1825, p. 583; 1826, p. 247; 1836, p. 422, all based on a misidentification.

4. The current concept of *T. picrostris* (Fabricius) as a species with six antennal funicular articles stems from assignment by Germar, 1824, and Schönherr, 1825, 1826, of *Rhynchaenus picrostris* 'var. b' Gyllenhal, 1813, *Ins. Suec.*, Coleopt. vol. 1 (3), p. 122 to genus-group taxa so characterised, followed by Schönherr's citation (1836, p. 422) of Fabricius, 1787, as authority for *Tychius (Miccotrogus) picrostris*. The name *picrostris* was first associated with *Tychius* and *Miccotrogus* when Schönherr, 1825, p. 583, established *Miccotrogus* as a subgenus of *Tychius* Germar. Schönherr designated *Curculio cuprifer* Panzer, [1799], *Ins. Germ.*, Heft 61, tab. 10 as type species of *Miccotrogus* and also referred to the genus '*Sibin. picrostris* Germ., Rhynch. id. var. Gyll.', cited in 1826, p. 247 as '*Rhynch. picrostris* var. Gyllenhal. *Ins. Sv.*'. This 'var.' was not the *R. picrostris* of Gyllenhal, 1813, p. 121, which Gyllenhal attributed to Fabricius, 1801, p. 449, Paykull, 1800, p. 253 and Herbst, 1795, pp. 278, 446. Instead it was a 'var. b' which Gyllenhal, 1813, p. 122, apparently considered to be the same as *Curculio cinerascens* Marsham, 1802, *Entomol. Britt.*, vol. 1, p. 248; and according to R. T. Thompson (*British Museum (Natural History)*) the type of Marsham's species in that museum belongs to the species now known as *Tychius picrostris*. This 'var. b' was assigned by Germar, 1824, p. 291 to *Sibinia*, while Schönherr, 1825, p. 583 assigned the 'var. Gyll.' and (1826, p. 247) the 'var. Gyllenhal. *Ins. Sv.*' to *Miccotrogus*. *Sibinia* Germar, 1824, p. 289 and *Miccotrogus* Schönherr, 1826, p. 247, were both characterised as having six antennal funicular articles, where-

as Schönherr, 1826, p. 245, described *Tychius* as having seven funicular articles. Thus it is clear that Germar and Schönherr considered Gyllenhal's *picrostris* 'var. b' to be a species with 6 instead of 7 funicular articles, although Gyllenhal made no reference to the antennal funiculus. It is also clear that Schönherr, 1825, 1826, considered Gyllenhal's 'var. b' to be a species distinct from Gyllenhal's *R. picrostris*. In 1825, p. 583, Schönherr listed *R. picrostris* 'var. Ghil. (sic)' in *Tychius* and the *R. picrostris* 'var. Gyll.' in *Miccotrogus*. In 1836, p. 411, he cited '*R. picrostris* alpha' with Germar, 1813 as author, as a synonym of *T. tomentosus*, while on p. 422 he placed the 'var. b' in his *T. (Miccotrogus) picrostris*. It is significant that Schönherr, 1825, 1826 and Germar, 1824, cited Gyllenhal instead of Fabricius as the author of *picrostris*. Later, however (1836, p. 422), by citing Fabricius as one of the authorities for *T. (Miccotrogus) picrostris*, Schönherr brought Fabricius' name into association with Gyllenhal's *picrostris* 'var. b', characterised as having six funicular articles. Subsequent authors have attributed the name *picrostris* to Fabricius, not to Gyllenhal.

5. In order to determine the identity of Gyllenhal's *R. picrostris* and his *R. picrostris* 'var. b' (1813, pp. 121–122), 46 specimens identified as *R. picrostris* from the Gyllenhal collection at Uppsala University, Sweden, were examined (Clark, 1971). According to Lars Hedstrom (in litt., 31 January 1970) two of these were from the 'Insecta Suecica collection' whereas 44 form the 'total representation of Gyllenhal's general collection'. The 44 were sent under a general label: '*Rhynchaenus picrostris* S. El. 2. 449. 55. Curc. id. Payk. S.3. 453. 73'. All 46 specimens are *T. stephensi* (with seven funicular articles). Later, 10 specimens, which Hedstrom (in litt., 12 May 1970) says 'were placed immediately below' the 44 specimens in Gyllenhal's general collection were examined (Clark, 1971). The legible portion of the label with these specimens reads: '*Tychius tomentosus* Sch. *picrostris* var. b Sch.'. Nine of these are *T. stephensi*, the tenth is *T. picrostris* (with six funicular articles). These labels must have been written after 1817, when *Tychius* was established, so there is some question as to whether they represent Gyllenhal's concept of his *picrostris* 'var. b'.

6. The citation of Fabricius, 1787, in association with *R. picrostris* 'var. b' under the name *Tychius (Miccotrogus) picrostris* by Schönherr, 1836, p. 422, appears to have been a mistake. As discussed above, both Schönherr, 1825, 1826 and Germar, 1824, considered 'var. b' to be a species with six funicular articles. It has since been discovered (see Clark, 1971) that *Curculio picrostris* Fabricius, 1787, p. 101, is represented by two specimens in the Zoologisk Museum, Copenhagen, one in Fabricius' own collection, the other in the collection of Sehested and Tønder Lund. In 1970 B. D. Valentine (*Ohio State University*) examined 'the type' of *C. picrostris* at Copenhagen and determined it as *T. stephensi* by comparison with specimens so identified by R. T. Thompson. Later, however, Thompson (in litt., 3 September 1975) questioned

Valentine's determination, noting that the original description of *C. picirostris* does not fit *T. stephensi*. Consequently, L. Dieckmann (*Akademie der Landwirtschaftswissenschaften, Eberswalde, DDR*) was asked to examine the 'type' of *C. picirostris*. He reported (in litt., 6 May 1976) that the specimen is actually a small female *Tychius quinquepunctatus* (Linnaeus). This was seen as a possible explanation of the discrepancy between Fabricius' original description of *C. picirostris* and the 'type' seen by Valentine. It also brought to mind Valentine's assertion that a specimen identified as *Rhynchaenus picirostris* at Copenhagen was 'a tychiine, but larger than *T. stephensi*' (Clark, 1971, p. 13). Dr Dieckmann was next asked to investigate the possibility that there are actually two specimens of *C. picirostris* in the Fabrician material. A second specimen sent to him from Copenhagen proved to belong to the species known to him as *T. tomentosus* (the *T. stephensi* of Thompson and Valentine).

7. Dieckmann's identification of the second Fabrician specimen explains Valentine's identification of 'the type' of *C. picirostris* as *T. stephensi* but leaves open the question of which of the two should be considered the holotype. The *T. quinquepunctatus* is in the Tønder Lund collection at Copenhagen, while the *T. stephensi* is in Fabricius' own collection, originally at Kiel, but now in Copenhagen (Zimsen, 1964). S. L. Tuxen (*Zoological Museum, Copenhagen*) offered the following comment on these two specimens (in litt., 11 January 1977): 'Fabricius, 1787, p. 101, states under *picirostris* "Hafniae Dom. Lund"'. When the specimen on which he (Fabricius) based his description was present in Tønder Lund's collection he wrote "Mus. Dom. Lund", meaning museum Domini Lundi. This he did not do here, and so the logical solution should be that Tønder Lund sent him a specimen (Valentine's *T. stephensi*) from Copenhagen ("Hafniae") for his collection; this was the reason for our showing this specimen to Valentine as the type. At the second request, 14 November 1975, almost six years later, I decided on the other possibility (having forgotten Valentine's visit), namely that Fabricius had forgotten to write "Mus." Dom. Lund.— which has happened in other cases — and sent the specimen (Dieckmann's *T. quinquepunctatus*) from the collection of Sehested and Tønder Lund.' For historical reasons, then, the *T. stephensi* in Fabricius' own collection seems most likely to have been the original *C. picirostris* of Fabricius, 1787, p. 101. The discrepancy between this specimen and the original description, however, remains unexplained.

8. The name *Curculio fuscirostris*, wrongly attributed to Paykull, 1792, p. 62, has also been listed as a synonym of *T. picirostris* (Schönherr, 1836, p. 422; Klima, 1934, p. 31; Hoffmann, 1954, p. 1203). Although there is some evidence that the specimen Paykull called *fuscirostris* in 1792 was actually *T. picirostris*, his use of the name was based on a misidentification of *C. fuscirostris* Fabricius, 1775 (now *Apion fuscirostre* (Fabricius), see Dieckmann, 1977, p. 58). The name cannot

therefore be attributed to him or used for either of the clover seed weevils (Clark, 1978).

9. Schönherr, 1836, p. 412, had no specimens before him when he named *T. stephensi* but merely renamed the species that Stephens, 1831, p. 56, had misidentified as *T. tomentosus* (Herbst) (Marshall, 1957; Clark, 1971). He repeated word for word Stephens' diagnosis of '*T. tomentosus*' and cited Stephens' *T. tomentosus* in synonymy, while stating in a footnote 'mihi invisus' (unseen by me). He spelt the name '*stepheni*'. Stephens, 1839, p. 229, emended the spelling to *stephensi*. Since Schönherr's intention to name the species after Stephens is obvious, his original spelling can be considered a lapsus calami, so that Stephens' spelling is a justified emendation. The lectotype of *T. stephensi*, a specimen under the name *T. tomentosus* in the Stephens Collection in the British Museum (Natural History) designated by Clark, 1971, p. 10, is conspecific with the lectotype of *T. tomentosus* (Herbst, non Olivier), also designated by Clark there.

10. The status of the type of *Curculio cinerascens* Marsham, 1802 must be clarified. According to R. T. Thompson, in litt. 12 February, 1982, 'The specimen is a female and is virtually complete apart from the damage caused by being impaled upon a relatively massive pin. In addition to the disc bearing the number 28, there is a label with the name *cinerascens* in an unknown hand (almost certainly not Stephens or Marsham). There are three other specimens in the series, but they are mounted on points'. It is known that when Marsham's collection was to be sold at auction, Stephens got access to it and made up 'a set' which he incorporated in his own collection. With these specimens are numbered discs, the numbers corresponding to those given to each species in Marsham's work. The remainder of Marsham's collection was dispersed by the sale and no trace of it survives. There is therefore no means of knowing how many specimens of any species Marsham had. In these circumstances I agree with Mr Thompson that the sound course is to assume that he had more than one and, in the present instance, to designate the female referred to above as lectotype of the species.

11. Regardless of which of the two Fabrician specimens in the Copenhagen Museum is eventually decided to be the holotype of *C. picirostris*, strict application of the Law of Priority dictates that the name of the species now known as *T. picirostris* (Fabricius) must be changed. If the specimen of *T. stephensi* turns out to be the holotype, it will be necessary to transfer the name *picirostris* from the clover seed weevil to the red clover seed weevil to replace the names *T. stephensi* and *T. tomentosus*. This would cause undue confusion. The use of the name *tomentosus* Herbst has no justification because of its status as a junior primary homonym. It is preferable that the name *stephensi* be conserved as the name for the red clover seed weevil. Stability of current nomenclature (except for *tomentosus*) can be preserved by ratifying the nomencla-

ture adopted by Milliron, 1949. The International Commission on Zoological Nomenclature is therefore asked:

(1) to use its plenary powers to set aside as type specimens of *Curculio picirostris* Fabricius, 1787, the two tychiine weevil specimens in the Fabricius and the Sehested and Tønder Lund collections at Copenhagen and designate as neotype of that species the female lectotype of *Curculio cinerascens* Marsham, 1802 in the British Museum (Natural History), which has six antennal funicular articles and belongs to the species currently known as *Tychius picirostris* (Fabricius, 1787). (*C. cinerascens* was described in a work devoted exclusively to British beetles; the type locality is therefore assumed to be 'Britain');

(2) to place on the Official List of Specific Names in Zoology:

(a) the specific name *picirostris* Fabricius, 1787, as published in the binomen *Curculio picirostris*, and as interpreted by reference to the neotype designated under the plenary powers in (1) above;

(b) the specific name *stephensi* Schönherr, 1836, as published in the binomen *Tychius stepheni* (sic), as interpreted by reference to the lectotype designated by Clark, 1971, p. 10;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) the specific name *tomentosus* Herbst, 1795, as published in the binomen *Curculio tomentosus* (a junior primary homonym of *Curculio tomentosus* Olivier, 1790);

(b) *stepheni* Schönherr, 1836, as published in the binomen *Tychius stepheni* (an incorrect original spelling of *stephensi* Schönherr, 1836, in the same combination).

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